

## Programmable Controller RT484



- ◆ Two 4-digit displays
- ◆ 4 DIN cases
- ◆ Universal programmable input
- ◆ Various control algorithms including auto-tuning
- ◆ PID-pulse and PID for motor valves
- ◆ Programmable digital filter
- ◆ Manual mode for bumpless switching
- ◆ Calibration and self-calibration
- ◆ RS485 serial interface available

RT484 is a multifunctional programmable controller with a universal input for the most common thermoresistances, thermocouples, and linear signals. The input has a built-in automatic software compensation of line resistance and cold junction temperature as well as automatic software compensation of temperature drift, and can be calibrated manually. RT484 is also equipped with a programmable input filter and two 4-digit displays with programmable refresh rate. Available are various options for access restriction. The device can have up to 2 outputs (2 relays or 1 relay and 1 analog output), which can control variety of actuators through different programmable control algorithms. RT484 can work in manual or automatic mode, and an RS485 serial interface enables networking.



### Technical specifications

Input		(programmable)
Pt100 (w=1.385, 1.391); 3-wire		-100...600 °C
Cu100 (w=1.426, 1.428); 3-wire		-50...200 °C
Thermocouple "J"		0...1000 °C
Thermocouple "K"		0...1300 °C
Thermocouple "S"		0...1700 °C
Thermocouple "R"		0...1700 °C
Thermocouple "B"		100...1800 °C
Thermocouple "C"		0...2300 °C
Thermocouple "L - GOST"		0...600 °C
Linear voltage 0...50 mV <sup>(1)</sup>		-1999...9999, programmable
Linear current 0...20 mA		-1999...9999, programmable
Linear current 4...20 mA		-1999...9999, programmable <sup>(2)</sup>
Input type selection		programmable
Decimal point selection		programmable
Digital filter		programmable
Input calibration		programmable
Outputs		(up to 2 outputs)
Relay electromechanical	5A/250V w/ NO/NC or NO contact	
Solid state relay	1A/250VAC	
MOS gate	0.1A/60V, optically isolated	
Output for external SSR	5...24 V, 30 mA	
Operation modes	manual and automatic	
Control algorithms	ON/OFF, PID-pulse, and PID for motor valves, programmable	
Auto-tuning	programmable	
Alarms	programmable	
Other control features	BUMPLESS and ANTI-WINDUP	
Analog output <sup>(3)</sup>	4(0)...20 mA or 0...10 V, isolated	
Serial interface	RS485, isolated	

Accuracy				
Measurement error	0.3% <sup>(3)</sup> from span			
Temperature drift	0.01% from span for 1 °C			
Self-calibration	automatic software			
Cold junction compensation	automatic software			
RTD line compensation	automatic software			
Power supply				
Mains supply voltage	230 VAC or 115 VAC			
SMPS voltage	90...250 VAC/DC			
Isolated low voltage	12...24 VAC/DC or 24 VAC			
Non-isolated low voltage	12...24 VAC/DC			
Consumption	max. 5 VA			
Indication and controls				
Digital display	2 x 4 LED indicators			
LEDs	2 LEDs for output state			
Keyboard	3 membrane keys			
Operating conditions				
Operating temperature	-10...55 °C			
Operating humidity	0...85 %RH			
Design and materials				
	'B'	'H' / 'V'	'Q'	'S'
Front dimensions [mm]	96x96	96x48	72x72	48x48
Mounting	panel	panel	panel	panel
Panel cutout [mm]	90x90	90x42	67x67	45x45
Mounting depth [mm]	98	98	66	100
PV display digit height [mm]	20	14 / 10	14	10
SV display digit height [mm]	14	10	10	10
Maximum weight [g]	350	300	300	200
Protection, front/terminals	IP54/20	IP54/20	IP54/20	IP54/20
Increased front IP (option)	IP65 <sup>(5)</sup>	IP65	-	-
Case material	plastic	plastic	plastic	plastic
Wiring (terminals)	plug-in	plug-in	screw	screw

<sup>(1)</sup> Other voltage ranges can be obtained by the means of two external resistors.

<sup>(2)</sup> Provides loop supply voltage - 24 VDC (only w/ isolated power supply)

<sup>(3)</sup> Instead of 1<sup>st</sup> relay! If mounted, it can be programmed as control or retransmission!

<sup>(4)</sup> 0.5% for noble thermocouples

<sup>(5)</sup> Ask for availability!

<sup>(6)</sup> Not available for cases 'Q' and 'S'

### Ordering code RT484 - G0.G1.G5G5.G9'9".G11 - #1

Code	Feature or option	Code values
G0	Case (front size)	B - 96x96 mm, H - 96x48 mm, V - 48x96 mm, Q - 72x72 mm, S - 48x48 mm
G1	Power supply	A - 230 VAC, B - 115 VAC, C - 90...250 V, P - 12...24 V, non-isolated, Q - 12...24 V, isolated, R - 24 VAC
G5	Relay output	X - none, C - relay NO/NC, D - SSR, J - for external SSR, M - isolated MOS gate
G9'	Serial interface	X - none, B - RS485
G9"	Protocol	A - ASCII, C - ASCII for "PolyMonitor"
G11	Analog output <sup>(3,5)</sup>	X - none, E - 0...20 mA, F - 4...20 mA, K - 0...10 V
#1	Increased front protection	X - none, P - IP65 front protection <sup>(6)</sup>